EXHIBIT A

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/014,987	03/23/2022	9185291	52959.54X291	1987

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EXAMINER
LAROSE, COLIN M

ART UNIT	PAPER NUMBER
3992	

MAIL DATE	DELIVERY MODE
12/22/2022	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. *90/014,987* .

PATENT UNDER REEXAMINATION *9185291* .

ART UNIT *3992* .

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Office Action in Ex Parte Reexamination	Control No. 90/014,987	Patent Under Reexamination 9185291	
	Examiner Colin LaRose	Art Unit 3992	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

a. ☑ Responsive to the communication(s) filed on 06 September 2022.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

b. ☐ This action is made FINAL.

c. ☐ A statement under 37 CFR 1.530 has not been received from the patent owner.

A shortened statutory period for response to this action is set to expire 2 month(s) from the mailing date of this letter. Failure to respond within the period for response will result in termination of the proceeding and issuance of an *ex parte* reexamination certificate in accordance with this action. 37 CFR 1.550(d). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).** If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892.
2. ☐ Information Disclosure Statement, PTO/SB/08.
3. ☐ Interview Summary, PTO-474.
4. ☐ _____.

Part II SUMMARY OF ACTION

1a. ☑ Claims 1-7,10-14,17 and 22 are subject to reexamination.

1b. ☑ Claims 8-9,15-16 and 18-21 are not subject to reexamination.

2. ☐ Claims _____ have been canceled in the present reexamination proceeding.

3. ☑ Claims 1-7,10-11 and 14 are patentable and/or confirmed.

4. ☑ Claims 12-13,17 and 22 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ The drawings, filed on _____ are acceptable.

7. ☐ The proposed drawing correction, filed on _____ has been (7a) ☐ approved (7b) ☐ disapproved.

8. ☐ Acknowledgment is made of the priority claim under 35 U.S.C. 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of the certified copies have

1 ☐ been received.

2 ☐ not been received.

3 ☐ been filed in Application No. _____.

4 ☐ been filed in reexamination Control No. _____.

5 ☐ been received by the International Bureau in PCT application No. _____.

* See the attached detailed Office action for a list of the certified copies not received.

9. ☐ Since the proceeding appears to be in condition for issuance of an *ex parte* reexamination certificate except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte* Quayle, 1935 C.D. 11, 453 O.G. 213.

10. ☐ Other: _____

cc: Requester (if third party requester)

NON-FINAL ACTION (*EX PARTE* REEXAMINATION OF U.S. PATENT 9,185,291)

TABLE OF CONTENTS

I. ACKNOWLEDGEMENTS

This non-final Office action addresses *ex parte* reexamination control no. 90/014,987 ("Instant Proceeding"). Based upon a review of the Instant Proceeding, the actual filing date is March 23, 2022 ("Actual Filing Date").

The Instant Proceeding is a third-party requested *ex parte* reexamination of U.S. Patent No. 9,185,291 ("Patent Under Reexamination") titled "DUAL APERTURE ZOOM DIGITAL CAMERA." The Patent Under Reexamination was filed on June 12, 2014, as a Patent Cooperation Treaty application ("PCT Filing Date") and assigned by the Office non-provisional U.S. patent application control number 14/365,711 ("National Stage Application") and issued on November 10, 2015, with claims 1-22 ("Originally Patented Claims").

II. STATUS OF CLAIMS

Claims 1-7, 10-14, 17, and 22 are currently pending ("Pending Claims").

Claims 1-7, 10-14, 17, and 22 are currently examined ("Examined Claims").

Claims 8, 9, 15, 16, and 18-21 are withdrawn from consideration.

Regarding the Examined Claims and as a result of this Office action:

Claims 12, 13, 17, and 22 are rejected under 35 U.S.C. § 103.

Claims 1-7, 10, 11, and 14 are confirmed to be patentable.

III. PATENT OWNER STATEMENT

Patent Owner's optional statement pursuant to 37 C.F.R. § 1.530 was received on September 6, 2022, and has been considered.

Rule 1.530 provides:

> (c) Any statement filed by the patent owner shall clearly point out why the subject matter as claimed is not anticipated or rendered obvious by the prior art patents or printed publications, either alone or in any reasonable combinations.

Since the Patent Owner Statement addresses issues outside the scope of Rule 1.530 (i.e., it only addresses the Office's discretion to order reexamination rather than the patentability of the claims), it has been disregarded.

Requester's Reply to the Patent Owner Statement was received on October 14, 2022, and has been considered. Since Requester's Reply merely rebuts the out-of-scope discretionary issues raised by Patent Owner, it has likewise been disregarded.

IV. CLAIM INTERPRETATION – PHRASES INVOKING 35 U.S.C. § 112(f)

The following is a quotation of 35 U.S.C. 112(f):

> (f) Element in Claim for a Combination. – An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

The claims in this application are given their broadest reasonable interpretation using the plain meaning of the claim language in light of the specification as it would be understood by one of ordinary skill in the art. The broadest reasonable interpretation of a claim element (also commonly referred to as a claim limitation) is limited by the description in the specification when 35 U.S.C. 112(f) is invoked.

As explained in MPEP § 2181, subsection I, claim limitations that meet the following three-prong test will be interpreted under 35 U.S.C. 112(f):

(A) the claim limitation uses the term "means" or "step" or a term used as a substitute for "means" that is a generic placeholder (also called a nonce term or a non-structural term having no specific structural meaning) for performing the claimed function;

(B) the term "means" or "step" or the generic placeholder is modified by functional language, typically, but not always linked by the transition word "for" (e.g., "means for") or another linking word or phrase, such as "configured to" or "so that"; and

(C) the term "means" or "step" or the generic placeholder is not modified by sufficient structure, material, or acts for performing the claimed function.

Use of the word "means" (or "step") in a claim with functional language creates a rebuttable presumption that the claim limitation is to be treated in accordance with 35 U.S.C.

112(f). The presumption that the claim limitation is interpreted under 35 U.S.C. 112(f) is rebutted when the claim limitation recites sufficient structure, material, or acts to entirely perform the recited function.

Absence of the word "means" (or "step") in a claim creates a rebuttable presumption that the claim limitation is not to be treated in accordance with 35 U.S.C. 112(f). The presumption that the claim limitation is not interpreted under 35 U.S.C. 112(f) is rebutted when the claim limitation recites function without reciting sufficient structure, material or acts to entirely perform the recited function.

Claim limitations in this application that use the word "means" (or "step") are being interpreted under 35 U.S.C. 112(f) except as otherwise indicated in an Office action. Conversely, claim limitations in this application that do not use the word "means" (or "step") are not being interpreted under 35 U.S.C. 112(f) except as otherwise indicated in an Office action.

This application includes one or more claim limitations that do not use the word "means," but are nonetheless being interpreted under 35 U.S.C. 112(f) because the claim limitation(s) uses a generic placeholder that is coupled with functional language without reciting sufficient structure to perform the recited function and the generic placeholder is not preceded by a structural modifier. Such claim limitation(s) is/are:

Functional Phrase #1 (claim 1) – camera controller configured to combine in still mode at least some of the Wide and Tele image data to provide a fused output image of the object or scene from a particular point of view and to provide without fusion continuous zoom video mode output images of the object or scene, each output image having a respective output resolution;

wherein the video output images are provided with a smooth transition when switching between a lower zoom factor (ZF) value and a higher ZF value or vice versa, wherein at the

lower ZF value the output resolution is determined by the Wide sensor, and wherein at the higher ZF value the output resolution is determined by the Tele sensor.

Because this claim limitation is being interpreted under 35 U.S.C. § 112(f) it is being interpreted to cover the corresponding structure described in the specification as performing the claimed function, and equivalents thereof.

If Patent Owner does not intend to have any of these limitations interpreted under 35 U.S.C. § 112(f), Patent Owner may:

(1) amend the claim limitation(s) to avoid it/them being interpreted under 35 U.S.C. § 112(f) (e.g., by reciting sufficient structure to perform the claimed functions); or

(2) present a sufficient showing that the claim limitation recites sufficient structure to perform the claimed functions so as to avoid it being interpreted under 35 U.S.C. § 112(f).

For computer-implemented means-plus-function limitations, a general purpose computer is only sufficient as the corresponding structure for performing a general computing function. When there is a specific function to be performed, it is required that an algorithm for performing the function be disclosed, and the corresponding structure becomes a general purpose computer transformed into a special purpose computer by programming the computer to perform the disclosed algorithm. The specification must explicitly disclose the algorithm for performing the claimed function, and simply reciting the claimed function in the specification will not be a sufficient disclosure for an algorithm which, by definition, must contain a sequence of steps. See MPEP § 2181(II)(B):

> An algorithm is defined, for example, as "a finite sequence of steps for solving a logical or mathematical problem or performing a task." Microsoft Computer Dictionary, Microsoft Press, 5th edition, 2002. Applicant may express the algorithm

> in any understandable terms including as a mathematical formula, in prose, in a flow chart, or in any other manner that provides sufficient structure. [Citations and select quotations omitted.]

Based upon a review of the Patent Under Reexamination, the Examiner concludes that the corresponding structure for the above-identified Functional Phrases is disclosed in the Patent Under Reexamination as follows:

Functional Phrase #1 (claim 1) – camera controller configured to combine in still mode at least some of the Wide and Tele image data to provide a fused output image of the object or scene from a particular point of view and to provide without fusion continuous zoom video mode output images of the object or scene, each output image having a respective output resolution;

wherein the video output images are provided with a smooth transition when switching between a lower zoom factor (ZF) value and a higher ZF value or vice versa, wherein at the lower ZF value the output resolution is determined by the Wide sensor, and wherein at the higher ZF value the output resolution is determined by the Tele sensor

– corresponds to Camera Controller 114 (FIG. 114), which includes a sensor control module 116, a user control module 118, a video processing module 126, and a still processing module 128. The Camera Controller 114 is not disclosed as having any particular physical structure, except that it includes the various modules 116, 118, 126, and 128, which modules are also not disclosed as having any particular physical structure. The specification of the Patent Under Reexamination has been reviewed, and it does not appear that the Camera Controller 114 includes a particular physical structure or arrangement that enables the camera controller to execute the claimed functions.

As best understood, the Camera Controller 114 corresponds to a generic computing device that is specially programmed with algorithms so as to execute image processing

operations on captured video and still images. In accordance with MPEP § 2181, which provides guidance on computer-implemented means-plus-function limitations, the corresponding structure of Functional Phrase #1 is determined to be the disclosed algorithms for executing the claimed functions: FIG. 5 (still mode – steps 504–512) and FIG. 6 (video mode) of the Patent Under Reexamination.

FIG. 5 illustrates the algorithm for "combin[ing] in still mode at least some of the Wide and Tele image data to provide a fused output image of the object or scene from a particular point of view."

FIG. 6 illustrates the algorithm for "provid[ing] without fusion continuous zoom video mode output images of the object or scene, each output image having a respective output resolution, wherein the video output images are provided with a smooth transition when switching between a lower zoom factor (ZF) value and a higher ZF value or vice versa, wherein at the lower ZF value the output resolution is determined by the Wide sensor, and wherein at the higher ZF value the output resolution is determined by the Tele sensor."

Notably, the algorithm in FIG. 6 is characterized by setting the $\Delta Zoom_{up}$ and $\Delta Zoom_{down}$ parameters to be different so that the transition between the Wide and Tele sensors is performed at different zoom factors (ZFs) when zooming in or zooming out. This hysteresis phenomenon results in a smooth continuous zoom experience when in video mode (see Patent Under Reexamination at 11:6 – 12:11.

If Patent Owner wishes to provide further explanation or dispute the Examiner's interpretation of the corresponding structure, Patent Owner must identify the corresponding

structure with reference to the specification, and to the drawing, if any, by reference characters in response to this Office action.

V. PRIOR ART CITED HEREIN

The following prior art patents and printed publications are cited herein:

U.S. Patent 7,112,774 ("Baer");

U.S. Patent 7,859,588 ("Parulski"); and

U.S. Patent Application Publication 2012/0026366 ("Golan").

VI. CLAIM REJECTIONS – 35 USC § 103 (OBVIOUSNESS)

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12, 13, and 17 are rejected under 35 U.S.C. § 103 as being unpatentable over Golan (U.S. 2012/0026366) and Parulski (U.S. 7,859,588).

Regarding **claim 12**, Golan teaches a method for obtaining zoom images of an object or scene in both still and video modes using a digital camera, the method comprising the steps of:

a) providing in the digital camera a Wide imaging section having a Wide lens (122) with a Wide field of view (FOV), a Wide sensor (112) ~~and a Wide image signal processor (ISP)~~, a

Tele imaging section having a Tele lens (120) with a Tele FOV that is narrower than the Wide FOV, a Tele sensor (110) ~~and a Tele ISP~~, and a camera controller (Zoom Control 130) operatively coupled to the Wide and Tele imaging sections; and

b) configuring the camera controller ~~to combine in still mode at least some of the Wide and Tele image data to provide a fused output image of the object or scene from a particular point of view, and~~ to provide without fusion continuous zoom video mode output images of the object or scene, each output image having a respective output resolution (see FIG. 1 and paragraph [0039] – the image sensor selector 150 switches between the Wide and Tele imaging sections to provide video output from one of the sections without fusing it to the output of the other, and the images output from the sensors inherently exhibit respective output resolutions, as determined by the resolution of the image sensor – see paragraph [0004]; see also FIG. 2 and paragraphs [0036] and [0040] – continuous zoom capability is provided),

wherein the video mode output images are provided with a smooth transition when switching between a lower zoom factor (ZF) value and a higher ZF value or vice versa (i.e., FIG. 2 illustrates a procedure for providing a smooth transition when switching between the Wide and Tele imaging sections, corresponding to lower and higher zoom factors, respectively), and

wherein at the lower ZF value the output resolution is determined by the Wide sensor while at the higher ZF value the output resolution is determined by the Tele sensor (see paragraphs [0039], [0046], and [0047] – the specified zoom amount determines which imaging section (either Wide or Tele) is selected; the imaging section having a zoom more proximal to the requested zoom is selected; since it is inherent that Wide imaging sensors are associated with lower zoom factors than Tele imaging sensors, the lower zoom factors correspond to images being output from the Wide imaging section at a given resolution for the Wide sensor, and the

higher zoom factors correspond to images being output from the Tele imaging section at a given resolution for the Tele sensor).

Golan does not appear to expressly disclose the Wide and Tele imaging sections each include respective image signal processors (ISPs), as claimed.

Also, Golan's embodiment shown in FIGS. 1 and 2 does not include the camera controller being configured to combine in still mode at least some of the Wide and Tele image data to provide a fused output image of the object or scene from a particular point of view.

Parulski discloses a method and apparatus for operating a dual lens camera to augment an image. In particular, Parulski discloses a camera system (FIGS. 16A and 16B) having two different image sensors (614 and 618) for capturing images in wide and narrow fields of view, respectively. The analog outputs from the sensors are inputted to respective analog signal processors, which convert the analog image signals into digital form (see Parulski at columns 24:36-42 and 13:48-56; see also the analog signal processors 22 and 24 in FIG. 1).

It would have been obvious to modify the camera system of Golan to include Parulski's analog signal processors for each of Golan's imaging sections since Parulski teaches that providing signal processors for each imaging section in a dual-camera device is useful for digitizing captured image signals so that they can be subjected to further processing, transmission, and storage in digital form.

The obviousness of such a combination is also supported at least by *KSR* rationales (A), (C), and (D). See MPEP § 2141(III).

In addition, Parulski teaches a method (FIG. 14) for enhancing the depth of field of a still image taken using the dual-camera device. As shown in FIG. 14, based on the zoom setting being not higher than a threshold (502) the method performs autofocus operations (504, 506) until the zoom button is not pressed (508). When the shutter button is pressed, the first image capture module (i.e., wide angle module) captures a primary still image (510), and the second image capture module (i.e., narrow angle module) captures a secondary still image (512). Then, the secondary still image is used to enhance the depth of field of the primary image (514).

Alternatively, when the zoom setting is higher than the threshold the method performs autofocus operations (524, 526) until the zoom button is not pressed (528). When the shutter button is pressed, the second image capture module (i.e., narrow angle module) captures a primary still image (530), and the first image capture module (i.e., wide angle module) captures a secondary still image (532). Then, the secondary still image is used to enhance the depth of field of the primary image (534).

Steps 514 and 534 involve "fusing" the two images together because data of the secondary image is combined with data of the primary image so as to produce an enhanced primary image (see column 28:45-57 – the two images are combined ["fused"] into a modified image with a broadened depth of field).

It would have been obvious to modify the camera system of Golan by the teachings of Parulski so that the camera controller is additionally configured to combine in still mode at least some of the Wide and Tele image data to provide a fused output image of the object or scene from a particular point of view, as claimed, since Parulski teaches that in a dual-camera imaging device, information from a still image captured by one camera can be used to enhance the depth of field of the still image captured by the other camera (see FIG. 14 of Parulski). The advantages

and benefits of generating an enhanced-depth-of-field still image rather than a normal still image would have been readily apparent to those skilled in the art.

The obviousness of such a combination is also supported at least by *KSR* rationales (A), (C), and (D). See MPEP § 2141(III).

Regarding **claim 13**, the combination of Golan and Parulski teaches the method of claim 12, wherein the step of configuring the camera controller to provide without fusion continuous zoom video mode output images of the object or scene includes configuring each sensor with a setting that depends on the Wide and Tele FOVs and on a sensor oversampling ratio (see Golan at paragraphs [0009]–[0013] – the size ("configuration") of each sensor is determined by the sensor oversampling ratio (i.e., the maximal amount of lossless electronic zoom, such as x36), which is denoted by the Optimal_Zoom parameter; the Optimal-Zoom parameter is determined by the Wide and Tele fields of view, denoted by Wide_FOV and Narrow_FOV, respectively).

Regarding **claim 17**, the combination of Golan and Parulski teaches the method of claim 12, wherein the step of configuring the camera controller to combine in still mode at least some of the Wide and Tele image data to provide a fused output image includes configuring the camera controller to combine Wide and Tele image data only in focused areas (see Parulski at FIG. 14 and column 22:14 – 23:3 – the primary capture unit captures an image at a primary focus position, and a secondary capture unit captures an image at a secondary focus position; the secondary image is used to enhance the depth of field of the primary image, such as sharpening portions of the primary image that are positioned near the secondary focus distance, so that only in-focus image data is used for combining the images).

Claim 22 is rejected under 35 U.S.C. § 103 as being unpatentable over Golan (U.S. 2012/0026366), Parulski (U.S. 7,859,588), and Baer (U.S. 7,112,774).

Regarding **claim 22**, the combination of Golan and Parulski teaches the method of claim 12, but the combination does not appear to teach the step of configuring the camera controller to combine in still mode at least some of the Wide and Tele image data to provide a fused output image includes configuring the camera controller to synchronize the Wide and Tele sensors to force the two sensors to start exposure at the same time.

Baer discloses a CMOS stereo imaging system. Baer teaches that CMOS image sensors are preferred over CCD image sensors in stereo imaging applications where two image sensors spaced apart by a distance collect different images of a scene (see Baer at column 1:27 – 2:6). In particular, since CMOS sensors collect images one line at a time using a rolling shutter, there is a need for synchronizing the image capturing process for both of the sensors so that the sensors capture images at the same time and movement in the images is not confused with depth information (see Baer at column 2:28-50).

It would have been obvious to modify Golan and Parulski by the teachings of Baer to achieve the claimed invention by configuring the camera controller to synchronize the sensors so that they start exposure at the same time, as claimed, since Baer teaches that CMOS image sensors are preferred for use in stereoscopic imaging applications, and the rolling shutter operation of CMOS sensors produces a need for synchronizing the exposure time of the sensors.

The obviousness of such a combination is also supported at least by *KSR* rationales (A), (C), and (D). See MPEP § 2141(III).

VII. ALLOWABLE SUBJECT MATTER

Claims 1-7, 10, 11, and 14 are confirmed as patentable for the following reasons.

As indicated above in Section IV, the "camera controller" limitation of claim 1 is interpreted pursuant to § 112(f), and the corresponding structure of the camera controller is the algorithms disclosed in FIGS. 5 and 6 of the Patent Under Reexamination.

Claim 1 is patentable over the combination of Golan and Parulski because the combination does not teach or suggest the corresponding structure (i.e., algorithms) of the camera controller.

For still mode processing (FIG. 5), the algorithm involves a rectification step (504) in which Wide and Tele images are aligned to be an epipolar line and a registration step (506) in which the aligned Wide and Tele images are mapped into a registration map.

Golan discloses an electronic calibration step for determining alignment offsets of the wide and tele images using the known alignment offsets of the cameras (see step 220, FIG. 2 and paragraph [0045]). However, it is unclear whether Golan's alignment offset determination process involves aligning the images to the same epipolar line and producing a registration map, as taught by the Patent Under Reexamination.

The algorithm of FIG. 5 also involves a resampling step (508) in which the Tele image is resampled according to the registration map to obtain a re-sampled Tele image and a decision step (510) in which the re-sampled Tele image and the Wide image are used to detect errors in the registration, and if the dissimilarities are large enough, then an error is indicated and the Wide pixel values are chosen to be used in the output image.

Golan discloses re-sampling an acquired image frame to the requested zoom level (see step 260), however, Golan does not appear to disclose re-sampling according to a registration

map or using the re-sampled image data to detect registration errors, as taught by the Patent Under Reexamination.

The algorithm of FIG. 5 also involves a fusion step (512) in which the decision output, the re-sampled Tele image, and the Wide image are fused into a zoomed image.

Parulski discloses fusion steps at 514 and 534 of FIG. 14, however, Parulski's fusion step does not appear to take into account registration errors, as taught by the Patent Under Reexamination.

For video mode processing (FIG. 6), the algorithm involves choosing either or both sensors to be operational (step 602) for three different zoom factor (ZF) ranges:

(a) ZF range = 1 : Z_{switch} → only Wide sensor is operational

(b) ZF range = Z_{switch} : Z_{switch} + ΔZoom → both Wide and Tele sensors are operational

(c) ZF range = Z_{switch} + ΔZoom : Z_{max} → only Tele sensor is operational

The ΔZoom parameter is one value when zooming in ($\Delta Zoom_{up}$) and another value when zooming out ($\Delta Zoom_{down}$) so that the transition between the Wide and Tele sensors is performed at different zoom factors (ZFs) when zooming in or zooming out. This hysteresis phenomenon results in a smooth continuous zoom experience when in video mode (see Patent Under Reexamination at 11:6 – 12:11. Neither Golan or Parulski appears to disclose this hysteresis feature.

The algorithm of FIG. 6 also involves optional color balancing (steps 604 and 606); optional autofocusing using a transformation coefficient (steps 606 and 608); processing an outputted image by denoising, demosaicing, sharpening, and/or scaling (step 612); and

resampling the processed image according to the transformation coefficient, the requested zoom factor, and the output video resolution (step 614).

Golan discloses resampling an acquired image frame according to the requested zoom factor and an output resolution (step 260, FIG. 2), however, Golan does not appear to disclose that the resampling uses a transformation coefficient, as taught by the Patent Under Reexamination.

Since the combination of Golan and Parulski does not teach the algorithms disclosed in FIGS. 5 and 6 of the Patent Under Reexamination, the patentability of claim 1 is confirmed. Claims 2-7, 10, and 11 are patentable by virtue of dependence from claim 1.

Regarding **claim 14**, the combination of Golan and Parulski teaches the method of claim 13, but the combination does not appear to teach wherein the Wide and Tele FOVs and the oversampling ratio satisfy the condition:

$$\mathbf{0.8 * PL_{Wide}/PL_{video} < Tan(FOV_{Wide}) / Tan(FOV_{Tele}) < 1.2 * PL_{Wide} / PL_{video}}$$

where PL_{Wide} is an in-line number of Wide sensor pixels and wherein PL_{video} is an in-line number of output video format pixels.

At paragraphs [0009] – [0013], Golan gives an example in which the first image sensor has a 60º angle of view (i.e., Wide_FOV = 60º) and a second image sensor has a 60º angle of view (i.e., Narrow_FOV = 60º).

Golan also provides the seemingly contradictory teaching that Wide_FOV = Narrow_FOV * 6 even though the angles of Wide_FOV and Narrow_FOV are both given as 60º. Accordingly, it is reasonably understood that the Narrow_FOV is intended to be 1/6 the size of the Wide_FOV, which would set Wide_FOV as 60º and Narrow_FOV as 10º.

Accordingly, Tan (Wide_FOV) / Tan (Narrow_FOV) = Tan (60º) / Tan (10º) = 9.82.

In the same example, Golan gives $PL_{Wide}/PL_{video} = 36$.

Since 0.8 * 36 is not less than 9.82, Golan's Wide and Tele FOVs and sensor oversampling ratio do not satisfy the claimed condition.

Note that in the Requester's analysis of claims 4 and 5 (see pp. 55-59 of the Request), the Requester asserts that according to Golan's "informal terminology," FOV_{Wide} / FOV_{Tele} is used to represent the ratio Tan(θ_wide) / Tan(θ_narrow), where θ_wide and θ_narrow are the corresponding semi-angle of view θ. This assertion lacks sufficient basis. The Request fails to demonstrate that, in disclosing the quotient of Wide_FOV / Narrow_FOV, Golan actually intended to disclose the quotient being Tan (Wide_FOV) / Tan (Narrow_FOV) or that the quotient should be construed in any manner other than the express teaching. Golan's specification has been reviewed, and there appears to be no mention of tangent calculations throughout its entirety. Accordingly, imputing tangent calculations into Golan's description at paragraphs [0009] – [0013] for the ratio of Wide_FOV to Narrow_FOV appears to be unfounded.

VIII. CONCLUSION

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)). Extensions of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c). See MPEP § 2265.

All correspondence relating to this *ex parte* reexamination proceeding should be directed:

By Mail to: Mail Stop *Ex Parte* Reexam
Attn: Central Reexamination Unit
Commissioner for Patents
United States Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

By FAX to: (571) 273-9900
Central Reexamination Unit

By hand: Customer Service Window
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